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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,857	12/16/2003	Adrian Wing Fai Lo	890050.451	5364
500	7590	11/30/2005	EXAMINER	
SEED INTELLECTUAL PROPERTY LAW GROUP PLLC			CHU, CHRIS H	
701 FIFTH AVE			ART UNIT	PAPER NUMBER
SUITE 6300			2874	
SEATTLE, WA 98104-7092				

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/736,857

Applicant(s)

LO ET AL.

Examiner

Chris H. Chu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The prior art documents submitted by applicant in the Informational Disclosure Statement filed on December 16, 2003 have all been considered and made of record (note the attached copy of form PTO-1449).

### ***Drawings***

Seventeen (17) sheets for formal drawings were filed December 16, 2003 and have been accepted by the Examiner.

### ***Specification***

Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Setoguchi (US 2001/0017964) in view of Naganishi et al. (6,318,908).**

Regarding claim 1, Setoguchi teaches an optical module for transmitting and receiving optical signals comprising:

- at least one transceiver unit (see abstract);
- a package box (second mounting base member 205 in Fig. 14) which is a box-shaped enclosure; and
- resin filling the package box (resin 218 in Fig. 14);

wherein the transceiver unit includes

- a die pad (first mounting base member 203 in Fig. 14); and
- a ferrule (210 in Fig. 14) in which an end of an optical fiber is inserted.

Setoguchi teaches the claimed invention but differs because he does not show a platform body with a photodiode, a light emitter, a filter, and an optical fiber fixed on the platform body. Naganishi et al. teaches a platform body (63 in Fig. 15) with a photodiode (67 in Fig. 15) that transforms optical signals received through the optical fiber into electric signals, a light emitter (65 in Fig. 15), a filter (68 in Fig. 15) to divide the optical fiber at a position between the receiving photodiode and the light emitter, and an optical fiber (72 in Fig. 15) fixed on the platform body. Since both inventions are optical modules, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the platform body with a photodiode, a light emitter, a filter, and an optical fiber fixed on the platform body as disclosed by Naganishi et al. in the module as disclosed by Setoguchi for the purpose of providing bidirectional optical communication capability.

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Regarding claim 2, Setoguchi teaches an optical module wherein the package box has a recess for projecting the ferrule, and the gap between the recess and the ferrule is filled with adhesive in paragraph 106 of the detailed description and Fig. 14. The recess is the offset 211, and a gap between the ferrule 210 and the offset is filled with adhesive in order to fix the ferrule to the offset as disclosed in paragraph 106.

Regarding claim 3, Setoguchi teaches an optical module wherein the adhesive is further applied on the upper part of the ferrule near about the recess in Fig. 14. If the optical module of Fig. 14 were rotated, adhesive would be applied to the upper part of the ferrule.

Regarding claim 4, Setoguchi teaches a method of fabricating an optical module for transmitting and receiving optical signals comprising the steps of producing a box-shaped package box, charging resin into the package box and curing the resin to encapsulate the optical components on a die pad within the package box in paragraph 108. Although a lead frame is not specifically disclosed, Setoguchi teaches solder balls to be provided on the electrodes of the bottom surface of second mounting base member 205 so as to allow the module to be mounted on an external circuit board in paragraph 105. Furthermore, one of ordinary skill in the art would have found it obvious to use a lead frame with the optical module for the purpose of electrically connecting the module to other devices. Setoguchi also teaches a die pad mounted on the package box with a ferrule in which an end of a fiber is inserted in Fig. 14.

Still regarding claim 4, Setoguchi teaches the claimed invention but differs because he does not show mounting on the die pad an LE platform and a PD platform

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with an optical fiber, a photodiode, and a filter. Naganishi et al. teaches a platform body (63 in Fig. 15) with a light emitter (65 in Fig. 15) for generating optical signals to be transmitted, a photodiode (67 in Fig. 15) that photoelectrically converts optical signals received through the optical fiber, and a filter (68 in Fig. 15) that separates received optical signals from transmitted optical signals. Since both inventions are optical modules, it would have been obvious to one of ordinary skill in the art at the time the invention was made to mount the platform body with a light emitter, a photodiode, a filter, and an optical fiber fixed on the platform body as disclosed by Naganishi et al. on the die pad of the module as disclosed by Setoguchi for the purpose of providing bidirectional optical communication capability.

Regarding claim 5, Setoguchi teaches a method of fabricating an optical module wherein the step of pre-molding the frame includes a step of forming a recess in the package box for projecting the ferrule, and further comprises a step of injecting adhesive into a gap between the recess and the ferrule before the step of charging resin into the package box in paragraph 106 and Fig. 14.

Regarding claim 6, the proposed combination of Setoguchi and Naganishi et al. teaches the claimed invention but differs because they do not show the step of performing a screen test of the LE platform mounted on the die pad before mounting the PD platform. It would have been obvious for one skilled in the art to perform a screen test of the LE platform mounted on the die pad before the PD platform is mounted, since it is customary to test each part when it is mounted for the purpose of not producing defective modules. It would also have been obvious to do so for the purpose of saving

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time and resources by replacing any defective parts as soon as they are known to be defective instead of later after other surrounding parts have been installed as well.

### ***Conclusion***

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chris H. Chu whose telephone number is 571-272-8655. The examiner can normally be reached on 8:30 AM - 5:00 PM Mon-Fri.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on 571-272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Chris H. Chu  
Patent Examiner  
November 25, 2005



MICHELLE CONNELLY-CUSHWA  
PRIMARY EXAMINER  
11/28/05